

DETAILED ACTION

The amendments and arguments filed Jun. 12, 2009 are acknowledged and have been fully considered. Claims 80-83, 86, 87, 90-140, and 142-176 are now pending. Claims 1-79, 84, 85, 88, 89, and 141 are cancelled; claims 80, 81, 86, 87, 90-103, 106-109, 112-115, 118-121, 124-127, 130-137, 139, 142, 143, 146-148, 150-153, 156, 158-161, 165, 166, and 176 are amended; claims 166-176 are withdrawn. Claims 80-83, 86, 87, 90-140, and 142-165 are now under consideration.

Withdrawn Claims

In the response dated Dec. 22, 2008, applicants stated that claims 80-95, 97-112, and 114-161 read on the elected species, and these claims were examined in the first Office Action on the merits of the claims. In the response filed Jun. 12, 2009, applicants have stated that the previous listing of claims was in error and that claims 80-165 read on the elected species. Upon further consideration, the examiner agrees that claims 96, 113 and 162-165 claims can be included in the claims under examination. It is noted that, applicants' error resulted in the prior withdrawal of claims 96, 113 and 162-165. Thus, the finality of the instant Office Action is proper.

Information Disclosure Statement

Applicants request consideration of EP 0295886, which was previously cited on the IDS dated Jul. 17, 2006. EP 0295886 has now been considered

Regarding the IDS filed Jun. 12, 2009, references lined-through were not considered because they were not provided or were not provided in English.

OBJECTIONS/REJECTIONS WITHDRAWN

The objection to the specification is withdrawn, in light of the amendments to the specification.

The objections to claims 118 and 136 are withdrawn in light of the claim amendments.

The rejections of claims 84, 85, 88, 89, and 141 are moot in light of the claim cancellations.

The rejection of claims 80-83, 86, 87, 90-95, 97-112, 114-140, and 142-161 under 35 U.S.C. 112, 2nd paragraph is withdrawn, in light of the arguments and claim amendments.

The rejection of claims 80-82, 86, 87, 90, 93, 103, 104, 144, 145, 160, and 161 under 35 U.S.C. 103(a) over MOUGIN is withdrawn in light of the claim amendments.

The rejection of claims 80-83, 86, 87, 90-95, 97-140, and 144-161 under 35 U.S.C. 103(a) over ANTON and KANTNER is withdrawn in light of the claim amendments.

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The rejection of claims and 142 and 143 under 35 U.S.C. 103(a) over ANTON, KANTNER, and RAETHER is withdrawn in light of the claim amendments.

The rejection of claim and 86 under 35 U.S.C. 103(a) over ANTON, KANTNER, and GALLEGUILLOS is withdrawn in light of the claim amendments.

OBJECTIONS/REJECTIONS MAINTAINED

The double patenting rejections of record have been maintained in modified form as no action regarding these rejections has been taken by applicants at this time.

Claim Rejections - 35 USC § 112 (2nd Paragraph) (Maintained)

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 159 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 159 recites the limitation "...weight of active material, by weight of the...polymer." Firstly, there is insufficient antecedent basis for this limitation in the claim as no active material is recited in claim 80. Secondly, It is unclear what the active material of the polymer is. For example, claim 159 recites "...from 10% to 40% by weight of active material, by weight of the polymer." Is the active material a part of the polymer? If so, what part? Is the active material of the polymer simply the weight of the

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polymer itself? Alternatively, is the active material an additive to the composition? This limitation is not defined by the claim, the specification does not provide a sufficient standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Thus, one of ordinary skill in the art would not know what constitutes the active material. Since one of ordinary skill in the art could not be expected to make a reasonable distinction in the absence of further definitions and/or guidance in the specification, the metes and bounds of these claims are indefinite.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

U.S. Patent Application No. 10/528,698

Claims 80-83, 86, 87, 90-140, and 142-165 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 65-72, 74, 76, 78-136 and 147 of copending Application No. 10/528,698. Although the conflicting claims are not identical, they are not patentably distinct from

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each other because the scope of the '698 claims renders obvious that of the instant claims. The difference between the two claim sets is that the '698 claims do not recite a mean gloss of the block polymer. It is noted that the lip makeup compositions of the '698 application may be in the form of pastes, which are liquid compositions as defined in the instant application. Since each application recites the same monomer components and architecture, in the absence of evidence to the contrary, it is reasonable that the compositions claimed in the '698 application would meet the instant limitations and vice versa. It is noted that '698 claim 96 recites the elected species of isobornyl acrylate, claim 100 encompasses the instantly elected species of isobutyl acrylate, and claim 110 recites acrylic acid, the elected species for the additional monomer. Thus, the scope of the two claim sets is substantially identical, and the entire scope of the instant claims is rendered obvious over the '698 claims.

As set forth above, claims 80-95, 97-112, and 114-161 are directed to an invention not patentably distinct from claims 65-136 of commonly assigned 10/528,698. Specifically, see above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned 10/528,698, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35

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U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

U.S. Patent Application No. 10/528,699

Claims 80-83, 86, 87, 90-140, and 142-165 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 78-159 of copending Application No. 10/528,699. Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of the '699 claims renders obvious that of the instant claims. The difference between the two claim sets is that the '699 claims recite a mean gloss of the block polymer of greater than or equal to 50 out of 100. This composition would therefore meet the instant requirements of a mean gloss of 30 out of 100. Furthermore, each application recites the same monomer components and architecture. It is noted that '699 claim 91 recites the elected species of isobornyl acrylate, claim 125 encompasses the instantly elected species of isobutyl acrylate, and claim 132 recites acrylic acid, the elected species for the additional monomer. Thus, the scope of the two claim sets is substantially identical, and the entire scope of the instant claims is rendered obvious over the '699 claims.

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As set forth above, claims 80-95, 97-112, and 114-161 are directed to an invention not patentably distinct from claims 78-159 of commonly assigned 10/528,699.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned 10/528,699, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

U.S. Patent Application No. 10/529,264

Claims 80-83, 86, 87, 90-140, and 142-165 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 67-119 of copending Application No. 10/529,264. Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of the '264 claims renders obvious that of the instant claims. The difference

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between the two claim sets is that the '264 claims do not recite a mean gloss. However, the mean gloss would be optimized by the skilled artisan preparing lip or nail makeup products comprising the instantly claimed polymers. Furthermore, since the mean gloss is an inherent property of a given polymer and since each application recites the same monomer components and polymer architecture, in the absence of evidence to the contrary, it is reasonable that the compositions claimed in the '264 application would meet the mean gloss limitations and vice versa. It is noted that '264 claim 23 recites the elected species of isobornyl acrylate, claim 27 encompasses the instantly elected species of isobutyl acrylate, and claim 36 recites acrylic acid, the elected species for the additional monomer. Thus, the scope of the two claim sets is substantially identical, and the entire scope of the instant claims is rendered obvious over the '264 claims.

As set forth above, claims 80-95, 97-112, and 114-161 are directed to an invention not patentably distinct from claims 1-56 of commonly assigned 10/529,264. Specifically, see above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned 10/529,264, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were

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commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

U.S. Patent Application No. 10/529,266

Claims 80-83, 86, 87, 90-140, and 142-165 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 77-161 of copending Application No. 10/529,266. Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of the '266 claims anticipates or renders obvious that of the instant claims. The difference between the two claim sets is that the '266 claims recite that the composition has a transfer index of less than or equal to 40 out of 100. Regarding this limitation, the transfer index (i.e. transfer resistance) would be optimized by the skilled artisan. As taught by Anton, the "hard" portions of the polymers taught are responsible for shine of the polymer. Thus, it would be obvious to an ordinary artisan to optimize the gloss of the lipstick formulation. Since each application recites the same monomer components and architecture, in the absence of evidence to the contrary, it is reasonable that the compositions claimed in the instant application would meet the '266 limitation and vice versa. It is noted that '266 claims 111 and 117 recite the elected species of isobornyl acrylate, claims 114 and 117 encompass the elected species of isobutyl acrylate, and

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claim 154 recites acrylic acid, the elected species for the additional monomer. Thus, the scope of the two claim sets is substantially identical, and the entire scope of the instant claims is rendered obvious over the '266 claims.

Response to Arguments

Applicants have stated that they agree with the double patenting rejections (response, p. 37) and plan to file terminal disclaimers upon indication of allowable subject matter.

Since no terminal disclaimers have been filed at this time, the double patenting rejections are maintained.

NEW GROUNDS OF REJECTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 80-82, 86, 87, 90, 93, 103, 104, 144, 145, 160, and 161 and newly examined claims 162-165 are rejected under 35 U.S.C. 103(a) as being unpatentable over MOUGIN (U.S. 2002/0115780; of record) in view of FRECHET (U.S. 6,663,855; Filed Oct. 3, 2001; Ref. # 64 on IDS dated Jun. 12, 2009) and MELCHORS (U.S. 6,531,535; Filed Mar. 25, 2002; Ref. #62 on IDS dated Jun. 12, 2009).

1. Mougin discloses cosmetic compositions comprising film-forming block ethylenic copolymers comprising at least one rigid block having a glass transition temperature (T_g) greater than or equal to 20°C and at least one flexible block having a T_g of less than 20°C (abstract; claim 1). Mougin teaches that each block consists of one or more different monomer and may be a random copolymer (paragraph [0038]). These copolymers are present in a cosmetically acceptable organic liquid medium (e.g. an oil) (paragraphs [0099] and [0100]) and are useful in a variety of cosmetic compositions

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(paragraph [0130] and [0131]). Mougin teaches that these polymers increase the staying power of make-up compositions including those for keratin materials (paragraphs [0007] and [0012]) and produce cosmetics that remain glossy and do not wear (Example 4). Furthermore, Mougin teaches monomers for use in the blocks of the copolymer that are substantially identical to those claimed in the instant application (paragraphs [0047]-[0097]). For example, Mougin explicitly teaches the use of isobutyl acrylate (elected species) (paragraph [0084]) and allows for C1-20 alkyl (meth)acrylates containing a linear, branched, or cyclic chain (paragraphs [0070] and [0084]) (which would encompass applicants' elected species of isobornyl (meth)acrylate). Mougin teaches that for one example of such a polymer, the number average molar mass is 51,900 and the weight-average molar mass is 114,500 (paragraph [0143]).

2. Frechet discloses cosmetic compositions comprising linear block copolymers formed by a core polymer surrounded by two or more flanking polymers (abstract; col. 3, lines 52-57). Frechet teaches that the flanking polymers may be different from each other in terms of their composition and/or molecular weight (col. 6, lines 35-37) and teaches that the core and flanking polymers may comprise different monomers or may have one or more monomers in common (col. 6, lines 54-56). Frechet teaches that the T_g value of the core polymer is -200-150 °C (most preferably from -75-50 °C) and is different from that of the flanking polymers, which typically have T_g values of 0-300 °C (more preferably from 30-150 °C (col. 4, lines 21-36). In line with the teachings of Mougin, Frechet teaches the importance of the polymers having both hard and soft blocks (i.e. high and a low T_g portions) (col. 4, lines 33-36). Frechet teaches that one or

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more blocks can be random copolymer blocks and the overall polymer may have a variety of architectures such as A-R-B-A or A-R-B-R-A, where R is a random block of monomers A and B or of monomers B and C or more monomers. Moreover, the random block can vary in composition or size with respect to the overall block copolymer (col. 10, lines 25-44).

3. Mougin does not disclose the mean gloss of the compositions. Since the compositions of Mougin are glossy and provide high transfer resistance (i.e. staying power and wear resistance), just as those in the instant specification, it is reasonable that the cosmetic compositions taught by Mougin (e.g. Example 4) would meet the limitations of mean gloss and transfer index if measured under the highly specialized conditions required in claim 80. The compositions of Mougin are taught in a preferred embodiment as glossy nail varnishes (e.g. example 4), which are typically prepared for the very purpose of having a glossy or shiny finish. Thus, it is the examiner's position that the compositions taught by Mougin would have a mean gloss that meets the instant limitation and/or would be formulated as such by the ordinary artisan per the object of Mougin's invention. Doing so is completely in line with the teachings of Mougin.

4. The U.S. Patent Office is not equipped with analytical instruments to test prior art compositions for the infinite number of ways that a subsequent applicant may present previously unmeasured characteristics. When, as here, the prior art appears to contain the exact same ingredients and applicant's own disclosure supports the suitability of the prior art composition as the inventive composition component, the burden is properly shifted to applicant to show otherwise.

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5. Neither Mougin nor Frechet disclose the optimal polydispersity range of their polymers. It is the examiner's position that it would have been obvious and fully within the purview of one having ordinary skill in the art to control the optimum molecular weight, polydispersity, polymer composition and architectures of the resultant block copolymer product by varying experimental parameters such as source, amount, and solvation of catalyst/initiators/control agents, polymerization temperature and time, etc., as known in the art and taught by the references referred to by Mougin (paragraphs [0020]-[0028]). Nonetheless, one would have looked to the art to ascertain an acceptable polydispersity range for the polymers. Melchioris discloses copolymer compositions with the object of providing coating compositions with high resistance to solvents, water, and environmental influences with very good optical properties (gloss) and mechanical properties (hardness, flexibility), which can be applied in a wide range of fields (paragraphs [0013], and [0037]). Melchioris teaches that polydispersity values of 2.9-3.5 are acceptable to achieve the objects of the invention Table 1.

6. Frechet teaches that it is known in the art that the selection of macromers with different physical and chemical properties such as solubility and T_g value is a means to select the desired overall polymer properties (col. 1, lines 25-33). Frechet further teaches that block copolymers are advantageous over graft copolymers since the polymer architecture can be controlled more readily, and that this is particularly important when designing polymers with segments of distinct physical and chemical properties for particular applications (col. 1, lines 48-54). Frechet teaches that the polymers can be readily tailored to a particular application by changing the chemical

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composition (e.g. the types of monomers and their proportions) to optimize the physical properties such as solubility and T_g value (col. 2, lines 44-49; col. 6, lines 13-27).

7. Mougin teaches that the block ethylenic copolymers may be diblock or triblock polymers having various configurations of the blocks (paragraphs [0040]-[0043]). Even in the most simple diblock configuration (...ABABABAB...), the polymers comprise first and second blocks that are linked together via an intermediate segment comprising constituent monomers for the first and second blocks (for example, the underlined segment in the example above is such an intermediate segment). It is reasonable that a block comprising monomers from each of a rigid ("hard") and flexible ("soft") block will have a T_g between these two extremes, as would be recognized by the ordinary artisan. Thus, Mougin renders claims 84-86 obvious. Mougin teaches that the rigid and flexible blocks must be immiscible and incompatible (paragraph [0031]; claim 8), rendering claim 87 obvious. Mougin exemplifies a liquid cosmetic composition comprising a copolymer having rigid and flexible blocks with T_g values of 70 °C and -47 °C, respectively, rendering claims 89, 90, 93, 103, and 104 obvious.

8. Mougin teaches the use of pigments (i.e. dyestuffs) in the composition (paragraph [0123]), rendering claim 160 obvious. Mougin teaches formulating the polymer cosmetic compositions as, *inter alia*, anhydrous pastes (paragraph [0130]), and the use of these compositions as, *inter alia*, nail varnishes, mascara, and lipstick (paragraph [0131]), rendering claims 162-165 obvious.

9. In light of these teachings, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to prepare a polymer arranged with a

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first block and a second block connected by an intermediate block comprising a random copolymeric block having both types of monomers, to provide a suitable polymer compound in Mougin's invention. One would have been motivated to do so since the teaching of Mougin suggests such an arrangement, and since one of ordinary skill in the art would recognize that including a block comprising monomers from the "hard" and "soft" portions provides an additional means (besides the weight % of each block) to manipulate the overall properties of the polymer, as taught by Frechet. Further, it is well within the skill of ordinary artisan to select the appropriate properties of a copolymer for a given formulation. Therefore if an artisan wanted to produce a polymer with both high flexibility and shine qualities, one would have been motivated to arrange the "hard" and "soft" polymer blocks such that they were connected by an intermediate block as suggested by Mougin and taught by Frechet. Thus, the combined teachings of Mougin, Frechet, and Melchior render claims 80-82, 86, 87, 90, 93, 103, 104, 144, 145, 160-165 obvious.

Response to Arguments

Applicants' arguments with respect to Mougin are moot in light of the new grounds of rejection presented herein.

In regards to the Wikipedia links provided to support the allegation that low polydispersity index means less than 2.5, it is noted that Wikipedia is an open source application that can be edited by anyone with access to a computer. As such, Wikipedia links are generally not persuasive sources as evidence before the USPTO. Even if, *in arguendo*, these links were valid evidence, neither states that "low" means

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less than 2.5 as would be recognized by the ordinary artisan. Rather "low" is a relative term that can be interpreted subjectively by an artisan, who could reasonably adopt the view that any polydispersity index value of less than 5, 8, 10 (or any other subjective and arbitrary value) could be considered "low". Applicants are suggesting that an arbitrary value be attributed to Mougin's use of the term "low", when Mougin herself does not define this term. Further, as pointed out by applicants, one polymer described by Mougin appears to have a polydispersity index of over 2 (see p. 32 of the response). This is clearly not in line with the interpretation applicants now wish to improperly read into Mougin's disclosure.

Claims 80-83, 86, 87, 90-140, and 142-165 are rejected under 35 U.S.C. 103(a) as being unpatentable over ANTON (U.S. Patent No. 6,153,206; of record) in view of Kantner (U.S. 2002/0076390; of record), Frechet (Ref. # 64 on IDS dated Jun. 12, 2009), and Melchiors (Ref. #62 on IDS dated Mar. 23, 2009).

10. Anton discloses liquid cosmetic compositions comprising a non-elastomeric film-forming synthetic ethylenic block polymer in a cosmetically acceptable liquid medium (e.g. an oil) (abstract; col. 2, lines 9-23, 26-36, and 56; col. 6, lines 7-10; claim 1). Anton teaches that the polymer of the invention comprises portions having a low glass transition temperature (T_g) and portions having a high T_g and teaches that one block is preferably constructed from isobornyl methacrylate (col. 4, lines 5-27; Example 1), and has a glass transition temperature, T_g of 76-120 °C. Anton also teaches that a second block of the polymer is constructed from monomers, which when polymerized have a glass transition temperature, T_g of -10 to 75 °C. Anton teaches that the oil component is

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a volatile or nonvolatile oil (i.e. an organic liquid medium) (col. 6, lines 8-10 and 17-19). Anton teaches that the compositions are useful as shiny, transfer resistant cosmetics (col. 1, lines 60-67; Example 1).

11. Anton further teaches that the polymer of the invention may be a copolymer, a terpolymer (i.e. a polymer of three different monomers), or have any number of different units in addition to the first and second repeat units (i.e. blocks) (col. 2, lines 58-62; col. 4, lines 28-60). In particular, Anton teaches block terpolymers and teaches that the repeating units are monomer units which are present more than one time in the polymer chain and can be present in either repetitive sequence or in random sequence with other monomer units (col. 3, lines 21-24). Anton presents a number of suitable polymer architectures (table in col. 4). Anton also emphasizes the importance of having "hard" and "soft" portions (i.e. portions having different glass transition temperatures, T_g) in the polymer to maintain both flexibility and shine of the composition (col. 2, lines 51-58).

12. While Anton teaches a variety of monomers suitable for the block having a T_g of -10 to 75 °C, Anton does not teach the instantly elected species of isobornyl acrylate or isobutyl acrylate.

13. Kantner discloses cosmetic compositions containing non-elastomeric copolymers comprising a first (meth)acrylate ester monomer and a second (meth)acrylate, the various monomers having differing T_g values (abstract; paragraphs [0007] and [0010]). Kantner teaches that isobornyl (meth)acrylate (encompassing the elected species of isobornyl acrylate) is a suitable polymer for one block and that isobutyl acrylate (elected species) is a suitable polymer for the other block (paragraphs [0017] and [0018]).

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Kantner teaches that both isobornyl acrylate and isobutyl acrylate are preferred monomers for the respective blocks (paragraphs [0017] and [0019]). It is noted that teachings of Kantner establish the functional equivalence of isobornyl methacrylate ($T_g = 110\text{ }^{\circ}\text{C}$) (a preferred second repeat unit taught by Anton) and isobornyl acrylate ($T_g = 94\text{ }^{\circ}\text{C}$) as the monomers of the first block (paragraph [0019], line 14). Furthermore, the teachings of Kantner establish that isobutyl acrylate ($T_g = -24\text{ }^{\circ}\text{C}$) is functionally equivalent to *n*-butyl methacrylate (a preferred first repeat unit taught by Anton) (paragraph [0017]). Kantner teaches that the compositions provide improved gloss to cosmetics (paragraph [0009]). Kantner teaches that the compositions are advantageous in cosmetics such as, *inter alia*, nail polish and lipstick since the compositions because of their ability to form hydrophobic films that impart water resistance and transfer resistance (paragraph [0013]).

14. In light of these teachings, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to substitute isobornyl acrylate for another monomer having a high T_g and isobutyl acrylate for another monomer having a low T_g (i.e. substitute one preferred monomer for another) in the copolymers taught by Anton to prepare a copolymer with excellent gloss and improved water and transfer resistance. One would have been motivated to do so since Kantner teaches a preferred set of first monomers (paragraph [0017]) that overlaps with that of Anton's first repeat unit (col. 3, lines 56-65; Table in col. 4). Kantner also teaches a preferred set of second monomers (paragraph [0019]) that overlaps with Anton's second repeat unit (col. 3, line 66 to col. 4, line 4; Table in col. 4). Since the copolymers of Kantner are useful for the

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very same purpose as those of Anton (i.e. producing cosmetics with improved gloss and transfer resistance), the ordinary artisan would recognize the functional equivalency between the monomer sets of Anton and Kantner, and it would have been obvious to try any combination of these monomers.

15. Frechet discloses cosmetic compositions comprising linear block copolymers formed by a core polymer surrounded by two or more flanking polymers (abstract; col. 3, lines 52-57). Frechet teaches that isobutyl acrylate (elected species) is a preferred monomer of the invention (col. 8, lines 10 and 65-66; col. 9, lines 38-39). Frechet teaches that the flanking polymers may be different from each other in terms of their composition and/or molecular weight (col. 6, lines 35-37) and teaches that the core and flanking polymers may comprise different monomers or may have one or more monomers in common (col. 6, lines 54-56). Frechet teaches that the T_g value of the core polymer is -200-150 °C (most preferably from -75-50 °C) and is different from that of the flanking polymers, which typically have T_g values of 0-300 °C (more preferably from 30-150 °C (col. 4, lines 21-36). In line with the teachings of Anton, Frechet teaches the importance of the polymers having both hard and soft blocks (col. 4, lines 33-36). Frechet teaches that one or more blocks can be random copolymer blocks and the overall polymer may have a variety of architectures such as A-R-B-A or A-R-B-R-A, where R is a random block of monomers A and B or of monomers B and C or more monomers. Moreover, the random block can vary in composition or size with respect to the overall block copolymer (col. 10, lines 25-44).

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16. Neither Anton nor Frechet discloses the polydispersity of their polymers. It is the examiner's position that it would have been obvious and fully within the purview of one having ordinary skill in the art to control the optimum molecular weight, polydispersity, polymer composition and architectures of the resultant block copolymer product by varying experimental parameters such as source, amount, and solvation of catalyst/initiators/control agents, polymerization temperature and time, etc., as taught by the references referred to by Anton (col. 5, line 64 to col. 6, line 6). Nonetheless, one would have looked to the art to ascertain an acceptable polydispersity value for the polymers. Melchior discloses copolymer compositions with the object of providing coating compositions with high resistance to solvents, water, and environmental influences with very good optical properties (gloss) and mechanical properties (hardness, flexibility), which can be applied in a wide range of fields (paragraphs [0013], and [0037]). Melchior teaches that polydispersity values of 2.9-3.5 are acceptable to achieve the objects of the invention Table 1.

17. Frechet teaches that it is known in the art that the selection of macromers with different physical and chemical properties such as solubility and T_g value is a means to select the desired overall polymer properties (col. 1, lines 25-33). Frechet further teaches that block copolymers are advantageous over graft copolymers since the polymer architecture can be controlled more readily, and that this is particularly important when designing polymers with segments of distinct physical and chemical properties for particular applications (col. 1, lines 48-54). Frechet teaches that the polymers can be readily tailored to a particular application by changing the chemical

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composition (e.g. the types of monomers and their proportions) to optimize the physical properties such as solubility and T_g value (col. 2, lines 44-49; col. 6, lines 13-27).

18. In light of these teachings, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to prepare a polymer arranged with a first block and a second block connected by an intermediate block comprising both types of monomers, to provide a suitable polymer compound. One would have been motivated to do so since the teaching of Anton allows for and suggests such an arrangement, and since one of ordinary skill in the art would recognize that including a block comprising monomers from the "hard" and "soft" portions provides an additional means (besides the weight % of each block) to manipulate the overall properties of the polymer, as taught by Frechet. Further, it is well within the skill of ordinary artisan to select the appropriate properties of a copolymer for a given formulation. Therefore if an artisan wanted to produce a polymer with both high flexibility and shine qualities, one would have been motivated to arrange the "hard" and "soft" polymer blocks such that they were connected by an intermediate block as suggested by Anton and taught by Kantner and Frechet.

19. It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to formulate a polymer with a core and flanking blocks having different compositions and T_g values as taught by Frechet, to provide a transfer resistant makeup composition using isobornyl methacrylate as a preferred monomer as taught by Anton and isobutyl acrylate as a preferred monomer as taught by Frechet and to formulate the polymer with a polydispersity of 2.9-3.5 as taught by Melchioris. One

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would have had a high expectation of success given that each of the references are concerned with similar problems in the art, namely providing compositions with desirable cosmetic properties. The skilled artisan, in possession of Anton, Kantner, Frechet, and Melchior could have arrived at the instantly claimed invention by no more than routine experimentation. Furthermore, the MPEP states that the selection of known materials based on their suitability for their intended uses is *prima facie* obvious. "Reading a list and selecting a known compound to meet known requirements is no more ingenious than selecting the last piece to put in the last opening in a jig-saw puzzle." 325 U.S. at 335, 65 USPQ at 301. See MPEP § 2144.07. In the instant case, applicants are claiming a combination of known monomers, all of which are taught by Anton, Kantner, and Frechet, for the same purpose that has been taught in the art.

20. Anton does not measure the mean gloss of the compositions. While Anton does not measure this property of the compositions under the highly specialized conditions described in the instant specification (paragraphs [0013]-[0022], it is an object of Anton's cosmetic compositions to provide a shiny (i.e. glossy) finish and high transfer resistance (col. 1, lines 40-42 and line 60 to col. 2, line 5; Example 1). Thus, it is reasonable that the glossy compositions taught by Anton (e.g. Example 1) would fulfill this requirement, and it would certainly have been *prima facie* obvious to one of ordinary skill in the art to formulate and/or include the polymers taught by Anton in an amount sufficient to achieve these results, reading on claims 80-82 and 150-157.

21. As noted above, even in the most simple diblock configuration (...ABABABAB...), the polymers comprise first and second blocks that are linked together via an

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intermediate segment comprising constituent monomers for the first and second blocks (for example, the underlined segment in the example above is such an intermediate segment). It is reasonable that a block comprising monomers from each of a rigid ("hard") and flexible ("soft") block will have a T_g between these two extremes, as would be recognized by the ordinary artisan. Furthermore, since Anton teaches block terpolymers and teaches various configurations of the blocks in the polymers (col. 3, lines 21-24; table in col. 4) including homopolymeric blocks (col. 4, lines 28-60), it would have been obvious to an ordinary artisan to produce a polymer having homopolymeric blocks of any of the monomers taught by Anton, Kantner, or Frechet in any of the configurations taught by Anton. Thus, the combined teachings of Anton and Kantner render claims 80-82, 86, 90-103, 106-109, 112-115, 118-121, 124-127, 137, 139, 140, 142, and 143 obvious.

22. Regarding claim 83, Anton does not disclose the solubility of the block polymers, but teaches the use of the substantially the same monomer components of the block polymers as those instantly claimed. Additionally, Kantner teaches that the polymers of the invention are insoluble in a water system (paragraph [0011]). Therefore, it is reasonable that the polymers taught by the combination of Anton and Kantner will not be soluble at an active material amount of at least 1% by weight in water, and thus meet the limitations of claim 83.

23. Regarding claim 87, Anton does not disclose the compatibility of the various polymer blocks, and does not disclose the solubility of the blocks in the major organic liquid medium of the composition, which is how mutual incompatibility is defined in the

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instant specification (paragraph [0078]). Nonetheless, since the combination of Anton Kantner, and Frechet teach an identical polymer composition to that instantly claimed, including the same types of monomers, and blocks thereof, it is reasonable that these blocks are mutually incompatible as defined in the instant specification. Thus, claim 87 is rendered obvious by Anton, Kantner, and Frechet.

24. Anton teaches that the first repeat unit has a T_g of about -10 - 75°C and the second repeat unit has a T_g of about 76 - 120°C (abstract; col. 4, line 62 to col. 5, line 1). Specifically, Anton embodies a polymer comprising blocks of isobornyl methacrylate ($T_g = 110^\circ\text{C}$) and isobutyl methacrylate ($T_g = 53^\circ\text{C}$) (Example 1) and teaches that a variety of other monomers are useful in the polymers, for instance n-butylmethacrylate ($T_g = 20^\circ\text{C}$, which has a T_g between 20°C and 40° as defined in paragraph [0140] of the instant specification) and hexyl methacrylate ($T_g = -5^\circ\text{C}$) (col. 3, line 56 to col. 4, line 38; col. 5, lines 33-54, see the second table in col. 5). Furthermore, Anton teaches that preferable methacrylate esters useful for the first monomer are those obtained by esterification of methacrylic acid with an aliphatic alcohol of 2 to 30 carbon atoms (col. 3, lines 57-61). Thus, it would be obvious to an ordinary artisan to use any combination of these monomers rendering claims 97 and 98 obvious.

25. Anton teaches that relative to the polymer, the portions of the first and second repeat units can vary from 2-99% by weight of the first repeat unit to 1-98% by weight of the second repeat unit and vice versa (col. 5, lines 3-32). Thus, it would be obvious to an ordinary artisan to use any percentage within this range for each of the blocks. As discussed above, Anton teaches that manipulating the percentages of the blocks alters

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the properties of the final polymer. Thus, the skilled artisan would be motivated to adjust the amounts of the first and second blocks to optimize the properties of the polymer for a particular formulation. Therefore, claims 104, 105, 110, 111, 116, 117, 122, 123, 128, and 129 are obvious over the combination of Anton and Kantner.

26. Regarding claims 130-136, it is noted that Applicants have elected the species acrylic acid (a hydrophilic monomer) as the additional monomer. Anton teaches a variety of monomers useful for the various polymer blocks of the polymer (col. 3, line 56 to col. 4, line 27; second table in col. 5). As stated above, it would be *prima facie* obvious to an ordinary artisan to use any combination of these monomers as defined by the teachings of Anton. As discussed above, Anton teaches block terpolymers and teaches that the repeating units are monomer units which are present more than one time in the polymer chain and can be present in either repetitive sequence or in random sequence *with other monomer units* (col. 3, lines 21-24). Furthermore, Anton describes polymer architectures comprising at least three different monomers (col. 4, lines 28-60) and teaches that the final polymer may contain, in addition to the first and second repeat units, other monomeric units such as ethylenically unsaturated monomer units and silicon repeat units. Thus, it would have been *prima facie* obvious to an ordinary artisan at the time of the invention to include such an additional monomer (in addition to isobornyl methacrylate and, a second monomer having a lower T_g), in the polymer as taught by Anton. While Anton teaches methacrylic acid and esters thereof, acrylic acid itself is not disclosed.

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27. However, Kantner teaches that the copolymer may include other monomers similar to the first and second monomers or can include an optional third monomer that has different properties than the first two. For example, the third monomer can be hydrophilic (paragraphs [0020]-[0023]). Kantner teaches that these additional monomers can improve performance or reduce cost (paragraph [0023]). Moreover, Kantner teaches that blends of two or more copolymers may be used (paragraphs [0024] and [0025]) and that this can provide a composition with improved film forming characteristics. Kantner teaches that acrylic acid is a suitable hydrophilic monomer (paragraph [0022]). Additionally, Frechet discloses that both methacrylic acid and acrylic acid are highly preferred monomers in the block polymers of the invention (establishing them as functional equivalents) particularly when copolymers are used (col. 7, lines 6-9; col. 8, lines 8-10 and 58; col. 9, line 15). Thus, it would have been *prima facie* obvious to an ordinary artisan to produce a polymer having homopolymeric blocks of any of the monomers taught by Anton, as well as the additional monomers taught by Kantner and Frechet, such as acrylic acid, rendering claims 130-136 obvious.

28. Regarding claim 138, Anton does not disclose the weight % of the additional monomer relative to the first and/or second blocks.

29. However, Kantner teaches that the additional monomer can constitute up to a about 20% weight of the total amount of monomer used (paragraph [0021]). Kantner also teaches that this amount can be adjusted (for example, used at higher concentrations) depending on the specific additional monomer employed (paragraph [0022]). Thus, it would have been well within the skill of the ordinary artisan to adjust

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the amount of the additional monomer based on the teachings of Anton (see upper table in col. 5) and Kantner. One would be motivated to adjust the amount of the additional monomer based on the teachings of Kantner, which indicate that other monomers may be incorporated to improve performance or reduce cost, as would be recognized by the skilled artisan. Thus, an ordinary artisan would be motivated to include an additional monomer to for a variety of reasons, for instance to increase the hydrophilicity of the copolymer, or reduce the cost associated with its production as taught by Kantner (paragraph [0023]). Thus, claim 138 is obvious over Anton, Kantner, Frechet, and Melchiors.

30. Regarding claims 144-149, Anton teaches that the molecular weight average of the polymer is from 5,000 to 300,000, but is preferably from 5,000 to 50,000 (col. 5, lines 23-28). Anton exemplifies a composition comprising a polymer having a molecular weight (i.e. a number-average mass) of 27,100 (Example 1), reading on instant claims 144-149.

31. Regarding claims 158 and 159, Anton teaches that the preferred compositions comprise from 3-30% of the copolymer (col. 11, line 10), and embodies the copolymer in the range of 19-20% by weight of the composition (Example 1), reading on claims 158 and 159.

32. Both Anton (col. 9, lines 17-27; Example 1, wherein D&C and FD&C lakes are dyestuffs) and Kantner (paragraph [0030]) teach that the cosmetic compositions include other cosmetic ingredients including pigments and dyes, reading on claim 160.

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33. Anton teaches that the cosmetic compositions of the invention are for application to the skin (i.e. keratin material) or lips and may be in the form of creams or a composition that has a consistency such that it can be poured or molded into the form of an anhydrous a stick (col. 2, lines 26-41). One of ordinary skill in the art would recognize that such pourable/moldable compositions can be pastes, as is typical of anhydrous lipsticks, for example. Furthermore, Kantner teaches that the compositions are useful for, *inter alia*, mascara, eyeliner, and lipstick (paragraph [0013]). In light of these teachings, it would have been *prima facie* obvious to an ordinary artisan to produce the cosmetic compositions of Anton in the form of creams or pastes. One would be motivated to produce a paste form since the preferred embodiment of Anton is a lipstick (i.e. an anhydrous paste). Thus, claims 161-165 are obvious over Anton, Kantner, Frechet, and Melchiors.

Regarding the obviousness rejections above, it is noted that a reference is good not only for what it teaches by direct anticipation but also for what one of ordinary skill in the art might reasonably infer from the teachings. (*In re Opprecht* 12 USPQ 2d 1235, 1236 (Fed Cir. 1989); *In re Bode* 193 USPQ 12 (CCPA) 1976). In light of the forgoing discussion, the examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a). From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, in the absence of evidence to the contrary, the invention as a whole was *prima facie* obvious

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to one of ordinary skill in the art at the time the invention was made, as evidenced by the references.

Response to Arguments

Applicants' arguments have been fully considered but are not persuasive. Applicants arguments are largely moot given the new grounds of rejection applied herein. However, several relevant points will be addressed. Applicants argue that the intermediate segment of Anton's polymers (for example, -IIBB-, and -BBMM-) is not a random copolymer (response, p. 33).

Applicants are invited to explain precisely how -IIBB-, and -BBMM- do not qualify as random copolymers that meet the instant claim limitations. A random copolymer is, by definition, random. Therefore, by random chance, the -IIBB- and -BBMM- could result. These intermediate segments meet the instant claim language, which is extremely broad and places virtually no structural limitations on the intermediate segment. If applicants intend a different structure, the scope of the claim should be amended to reflect this. Moreover, Frechet teaches another version (in addition to Anton) of the instantly claimed structure.

Applicants argue that all of the blocks of Anton's polymers have T_g values over 40 °C (response, p. 34).

This is not true. Applicants have ignored the totality of Anton's teachings. Anton teaches that a second block of the polymer is constructed from monomers, which when polymerized have a glass transition temperature, T_g of -10 to 75 °C. Thus, such blocks are fully within the scope of Anton's disclosure.

NEW GROUNDS OF OBJECTION/REJECTION

Claim Rejections - 35 USC § 112 (1st Paragraph) (New Grounds of Rejection)

Claims 80-83, 86, 87, 90-140, and 142-165 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The response filed Jun. 12, 2009 has introduced NEW MATTER into the claims. Amended claim 80 now recites, "...wherein the at least one constituent monomer of the at least one first block differs from the at least one constituent monomer of the at least one second block". No support is found in the specification for this limitation. Amended claim(s) 158 and 159 now recite certain weight percentages of the polymer relative to the total weight of the composition. Support in the instant application is found for *active material (or solids)* in the claimed weight percentages. However, written description support is lacking for the polymer in these weight percentages. There is no nexus in the instant application between the identity of the "active material" and the polymer. Applicant has provided no evidence of such a correlation, which must be established based on the application as filed, to show that the active material and the polymer must surely be the same thing. In the absence of support for 1) the constituent monomers being different from one another and 2) *the polymer* in the specific percentage ranges

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recited in claims 158 and 159 , "... wherein the at least one constituent monomer of the at least one first block differs from the at least one constituent monomer of the at least one second block " and "...by weight of the at least one non-elastomeric film-forming linear block ethylenic polymer relative to the total weight of the composition" in claims 80, 158, and 159, respectively is new matter and must be removed from the claims.

The response did not sufficiently point out where support for amended claims 80-83, 86, 87, 90-140, and 142-165 could be found in the originally filed disclosure. Although the PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims, when filing an amendment an applicant should show support in the original disclosure for new or amended claims. See MPEP 714.02 and 2163.06 ("Applicant should therefore specifically point out the support for any amendments made to the disclosure."). It is noted that the two portions of the specification pointed to by applicants have nothing to do with either of the new matter issues raised herein. Instant claims 80-83, 86, 87, 90-140, and 142-165 now recite limitations, which were not clearly disclosed in the specification as filed, and now change the scope of the instant disclosure as filed. Such limitations recited in amended claimed 80-83, 86, 87, 90-140, and 142-165, which did not appear in the specification, as filed, introduce new concepts and violate the description requirement of the first paragraph of 35 U.S.C 112. Applicant is required to provide sufficient written support for the limitations recited in present claims 80-83, 86, 87, 90-140, and 142-165 in the specification or claims, as-filed, or remove these limitations from the claims in response to this Office Action.

Summary/Conclusion

Claims 80-83, 86, 87, 90-140, and 142-165 are rejected; claims 1-79, 84, 85, 88, 89, and 141 are cancelled.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin S. Orwig whose telephone number is (571)270-5869. The examiner can normally be reached Monday-Friday 7:00 am-4:00 pm (with alternate Fridays off). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila Landau can be reached Monday-Friday 8:00 am-5:00 pm at (571)272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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KSO

/David J Blanchard/
Primary Examiner, Art Unit 1643